AMENDMENT UNDER 37 C.F.R. § 1.111 Application No.: 10/530,176

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

 (Currently amended) A method of increasing the sensitivity of cancer cells or a tumour to a chemotherapeutic agent by contacting said cells or tumour with an isoflavonoid compound of formula (VI) or (VII):

(I):

$$R_1$$
 R_2
 R_2
 R_3
 R_4
 R_5

in which wherein

R₁, R₂ and Z are independently hydrogen, hydroxy, OR₉, OC(O)R₁₀, OS(O)R₁₀, CHO, C(O)R₁₀, COOH, CO₂R₁₀, CONR₃R₄, alkyl, haloalkyl, arylalkyl, alkenyl, alkynyl, aryl, heteroaryl, alkylaryl, alkoxyaryl, thio, alkylthio, amino, alkylamino, dialkylamino, nitro or halo, or

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R₂ is as previously defined, and R₁ and Z taken together with the carbon atoms to which they are attached form a five-membered ring selected from

R₁ is as previously defined, and R₂ and Z taken together with the carbon atoms to which they are attached form a five-membered ring selected from

and

W is R₁, A is hydrogen, hydroxy, NR₂R₄ or thio, and B is selected from

, or

W is R_{ij} and A and B taken together with the earbon atoms to which they are attached form a six-membered ring selected from

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W, A and B taken together with the groups to which they are associated are selected from

W and A taken together with the groups to which they are associated are selected from

and B is selected from

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wherein

 R_3 is hydrogen, alkyl, arylalkyl, alkenyl, aryl, an amino acid, $C(O)R_{11}$ where R_{11} is hydrogen, alkyl, aryl, arylalkyl or an amino acid, or CO_2R_{12} where $R_{12}R_{12}$ is hydrogen, alkyl, haloalkyl, aryl or arylalkyl,

R4 is hydrogen, alkyl or aryl, or

R₃ and R₄ taken together with the nitrogen to which they are attached comprise pyrrolidinyl or piperidinyl,

 R_{8} is hydrogen, $C(O)R_{H}$ where R_{H} is as previously defined, or $CO_{2}R_{12}$ where R_{12} is as previously defined,

 R_6 is hydrogen, hydroxy, alkyl, aryl, amino, thio, NR_3R_4 , COR_{11} where R_{11} is as previously defined, CO_2R_{12} where R_{12} is as previously defined or $CONR_3R_4$,

R₂-is-hydrogen, C(O)R_H-where R_H-is-as-previously defined, alkyl, haloalkyl, alkenyl, aryl, aryl, arylalkyl or Si(R₁₃)₃ where each R₁₃ is independently hydrogen, alkyl or aryl,

R₈ is hydrogen, hydroxy, alkoxy or alkyl,

 R_9 is alkyl, haloalkyl, aryl, arylalkyl, $C(O)R_{11}$ where R_{11} is as previously defined, or $Si(R_{13})_3$ where R_{13} -is-as-previously defined where each R_{13} is independently hydrogen, alkyl or aryl,

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R₁₀ is hydrogen, alkyl, haloalkyl, amino, aryl, arylalkyl, an amino acid, alkylamino or dialkylamino,

the drawing "---" represents either a single bond or a double bond,

T is independently hydrogen, alkyl or aryl,

X is O, NR4 or S, and

Y is

wherein

R₁₄, and R₁₅ and R₁₆-are independently hydrogen, hydroxy, OR₉, OC(O)R₁₀, OS(O)R₁₀, CHO, C(O)R₁₀, COOH, CO₂R₁₀, CONR₃R₄, alkyl, haloalkyl, arylalkyl, alkenyl, alkynyl, aryl, heteroaryl, thio, alkylthio, amino, alkylamino, dialkylamino, nitro or halo, or any two of R₁₄₅ and R₁₅ and R₁₆-are fused together to form a cyclic alkyl, aromatic or heteroaromatic structure.

and pharmaceutically acceptable salts thereof, and

wherein the chemotherapeutic agent is platinum-based or anti-mitotic agent.

- (Currently amended) A method of claim 1, wherein prior to the contacting, the sensitivity of the cancer cells or tumour were/was not sensitive to the chemotherapeutic agent-is restored.
- 3. (Currently amended) A method of claim 1, wherein the compound of formula [[(I)]](VI) or (VII) is administered to a subject in need of such treatment.

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4. (Currently amended) A combination therapy for the treatment or prophylaxis of cell proliferation, cancer or a disease associated with oxidant stress comprising administering to a subject a therapeutically effective amount of a compound of formula [[(I)]](VI) or (VII) as defined in claim 1 and a chemotherapeutic agent:

wherein

R₁, R₂ and Z are independently hydrogen, hydroxy, OR₂, OC(O)R₁₀, OS(O)R₁₀, CHO, C(O)R₁₀,

COOH, CO₂R₁₀, CONR₃R₄, alkyl, haloalkyl, arylalkyl, alkenyl, alkynyl, aryl, heteroaryl, alkylaryl, alkoxyaryl, thio, alkylthio, amino, alkylamino, dialkylamino, nitro or halo, or R₂ is as previously defined, and R₁ and Z taken together with the carbon atoms to which they are attached form a five-membered ring selected from

$$\begin{array}{ccc} & & & & \\ & & \\ & & & \\ & & \\ & & & \\ & & \\ & & & \\ & & \\ & & & \\ & & \\ & & \\ & & & \\ & & \\ &$$

 R_1 is as previously defined, and R_2 and Z taken together with the carbon atoms to which they are attached form a five-membered ring selected from

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W is R₁,

 $\underline{R_3}$ is hydrogen, alkyl, arylalkyl, alkenyl, aryl, an amino acid, $C(O)R_{11}$ where R_{11} is hydrogen,

alkyl, aryl, arylalkyl or an amino acid, or CO₂R₁₂ where R₁₂ is hydrogen, alkyl, haloalkyl,

aryl or arylalkyl,

R4 is hydrogen, alkyl or aryl, or

R₃ and R₄ taken together with the nitrogen to which they are attached comprise pyrrolidinyl or

piperidinyl,

 R_6 is hydrogen, hydroxy, alkyl, aryl, amino, thio, NR_3R_4 , COR_{11} where R_{11} is as previously

defined, CO2R12 where R12 is as previously defined or CONR3R4,

 R_9 is alkyl, haloalkyl, aryl, arylalkyl, $C(O)R_{11}$ where R_{11} is as previously defined, or $Si(R_{13})_3$

where R₁₃ where each R₁₃ is independently hydrogen, alkyl or aryl,

R₁₀ is hydrogen, alkyl, haloalkyl, amino, aryl, arylalkyl, an amino acid, alkylamino or

dialkylamino,

the drawing "---" represents either a single bond or a double bond,

T is independently hydrogen, alkyl or aryl,

R₁₄, and R₁₅ are independently hydrogen, hydroxy, OR₉, OC(O)R₁₀, OS(O)R₁₀, CHO, C(O)R₁₀,

COOH, CO2R10, CONR3R4, alkyl, haloalkyl, arylalkyl, alkenyl, alkynyl, aryl, heteroaryl,

thio, alkylthio, amino, alkylamino, dialkylamino, nitro or halo, or R₁₄ and R₁₅ are fused

together to form a cyclic alkyl, aromatic or heteroaromatic structure,

and pharmaceutically acceptable salts thereof, and

wherein the chemotherapeutic agent is platinum-based or anti-mitotic agent.

(Canceled).

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 (Previously Presented) A method of claim 4, wherein the cancer is selected from breast cancer, prostatic cancer, testicular cancer, ovarian cancer, uterine cancer, pancreatic cancer and colorectal cancer.

- (Original) A method claim 6, wherein the cancer is selected from ovarian cancer, prostatic cancer and pancreatic cancer.
- (Currently amended) A method of claim 4, wherein the administration of the compound of formula [[(I)]](VI) or (VII) precedes the administration of the chemotherapeutic agent.
- (Currently amended) A method of claim 4, wherein the administration of the compound of formula [[(J)][(VI) or (VII) and the chemotherapeutic agent is simultaneous.
- (Previously Presented) A method claim 4, wherein the combination therapy follows observed resistance by cancer cells or tumour to a chemotherapeutic agent.
 - 11.-12. (Canceled).
- (Previously Presented) A method of claim 4, wherein the chemotherapeutic agent is cisplatin, paclitaxel or carboplatin.
 - 14.-22. (Canceled).
- 23. (Currently amended) A pharmaceutical composition comprising a compound of formula [[(I)]](VI) or (VII) of claim-I and a chemotherapeutic agent:

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wherein

R₁, R₂ and Z are independently hydrogen, hydroxy, OR₂, OC(O)R₁₀, OS(O)R₁₀, CHO, C(O)R₁₀,

COOH, CO₂R₁₀, CONR₃R₄, alkyl, haloalkyl, arylalkyl, alkenyl, alkynyl, aryl, heteroaryl,

alkylaryl, alkoxyaryl, thio, alkylthio, amino, alkylamino, dialkylamino, nitro or halo, or

R₂ is as previously defined, and R₁ and Z taken together with the carbon atoms to which they are attached form a five-membered ring selected from

 R_1 is as previously defined, and R_2 and Z taken together with the carbon atoms to which they are attached form a five-membered ring selected from

W is R₁,

R₃ is hydrogen, alkyl, arylalkyl, alkenyl, aryl, an amino acid, C(O)R₁₁ where R₁₁ is hydrogen, alkyl, aryl, arylalkyl or an amino acid, or CO₂R₁₂ where R₁₂ is hydrogen, alkyl, haloalkyl, aryl or arylalkyl.

R4 is hydrogen, alkyl or aryl, or

R₃ and R₄ taken together with the nitrogen to which they are attached comprise pyrrolidinyl or piperidinyl.

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R₆ is hydrogen, hydroxy, alkyl, aryl, amino, thio, NR₃R₄, COR₁₁ where R₁₁ is as previously defined, CO₂R₁₂ where R₁₂ is as previously defined or CONR₃R₄.

 R_9 is alkyl, haloalkyl, aryl, arylalkyl, $C(O)R_{11}$ where R_{11} is as previously defined, or $Si(R_{13})_3$ where R_{13} where each R_{13} is independently hydrogen, alkyl or aryl,

R₁₀ is hydrogen, alkyl, haloalkyl, amino, aryl, arylalkyl, an amino acid, alkylamino or dialkylamino,

the drawing "---" represents either a single bond or a double bond,

T is independently hydrogen, alkyl or aryl,

R₁₄, and R₁₅ are independently hydrogen, hydroxy, OR₉, OC(O)R₁₀, OS(O)R₁₀, CHO, C(O)R₁₀,

COOH, CO₂R₁₀, CONR₂R₄, alkyl, haloalkyl, arylalkyl, alkenyl, alkynyl, aryl, heteroaryl,

thio, alkylthio, amino, alkylamino, dialkylamino, nitro or halo, or R₁₄ and R₁₅ are fused together to form a cyclic alkyl, aromatic or heteroaromatic structure,

and pharmaceutically acceptable salts thereof, and

wherein the chemotherapeutic agent is platinum-based or anti-mitotic agent.

- (Previously Presented): The pharmaceutical composition of claim 23, wherein said chemotherapeutic agent is cisplatin, paclitaxel or carboplatin.
 - (Canceled).
- (New): The method of claim 1, wherein the cancer cells and tumour are/is hormone-responsive.
- 27. (New): The method of claim 1, wherein the cancer is selected from breast cancer, prostatic cancer, testicular cancer, ovarian cancer, uterine cancer, pancreatic cancer and colorectal cancer.

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28. (New): The method of claim 1, wherein the cancer cells and tumour are/is from ovarian, prostate or pancreatic cancer.